

Ch 2 Test Review

p130-131

q 1-15

p134-135

q 1-10

Test Tuesday

Formula Sheet

SOH CAH TOA

$$a^2 + b^2 = c^2$$

Sum of Int Tri = 180

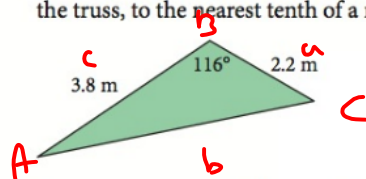
$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$

$$a^2 = b^2 + c^2 - 2bc \cos A$$

Feb 28-7:48 AM

2.4 Cosine Law, pages 104-111

11. A section of bridge truss is shown.
Determine the length of the third side of the truss, to the nearest tenth of a metre.



$$a = 2.2$$

$$b = ?$$

$$c = 3.8$$

$$\angle B = 116^\circ$$

$$b^2 = a^2 + c^2 - 2ac \cos \angle B$$

$$b^2 = (2.2)^2 + (3.8)^2 - 2(2.2)(3.8) \cos 116^\circ$$

$$b^2 = 4.84 + 14.44 - 16.72 (-0.4383)$$

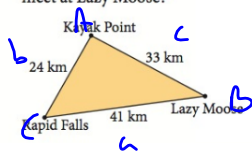
$$b^2 = 4.84 + 14.44 + 7.32$$

$$b^2 = \sqrt{26.6}$$

$$b = 5.1$$

Sep 28-11:54 AM

12. Three towns are joined by three highways, as shown. At what angle do the highways meet at Lazy Moose?



$$\begin{aligned} a &= 41 \\ b &= 24 \\ c &= 33 \\ \angle B &= ? \end{aligned}$$

$$b^2 = a^2 + c^2 - 2ac \cos \angle B$$

$$24^2 = 41^2 + 33^2 - 2(41)(33) \cos \angle B$$

$$576 = 1681 + 1089 - 2673 \cos \angle B$$

$$576 = 2770 - 2673 \cos \angle B$$

$$576 - 2770 = -2673 \cos \angle B$$

$$\frac{-2194}{-2673} = \frac{(-2673) \cos \angle B}{-2673}$$

$$+0.8208 = \cos \angle B$$

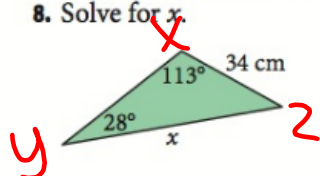
$$\cos^{-1}(0.8208) = \angle B$$

$$35 = \angle B$$

Sep 28-12:03 PM

2.3 Sine Law, pages 96-103

8. Solve for x .



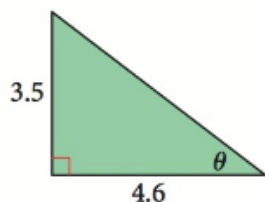
$$\frac{x}{\sin 113^\circ} = \frac{34}{\sin 28^\circ}$$

$$x = \frac{34 \sin 113^\circ}{\sin 28^\circ}$$

Sep 28-12:15 PM

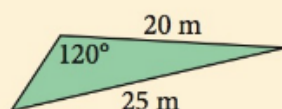
Chapter Task p. 133

9. Determine the primary trigonometric ratios for $\angle \theta$.



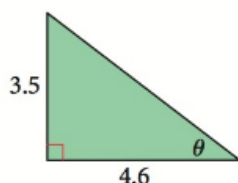
10. In $\triangle ABC$, $a = 5.3$ cm, $b = 4.8$ cm, and $c = 9.2$ cm. Determine the measures of the three interior angles of $\triangle ABC$.

11. A farmer is building a triangular pen for his sheep, as shown. Determine the total length of fence needed to build the pen.

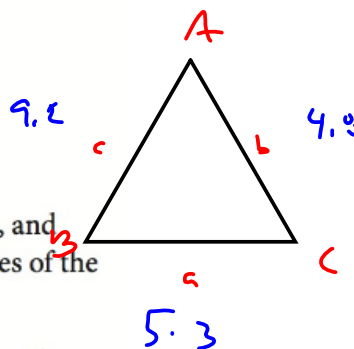


Mar 1-7:30 AM

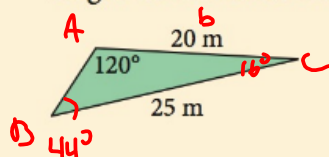
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$180 - (120 + 44)$
 16°
 Sine of Δ int

$$a^2 = b^2 + c^2 - 2bc \cos \angle A$$

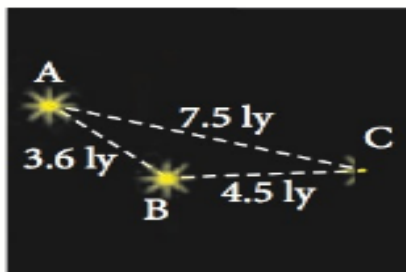
$$5.3^2 = 4.8^2 + 9.2^2 - 2(4.8)(9.2) \cos \angle A$$

$$28.09 = 23.04 + 84.64 - 88.32 \cos \angle A$$

$$28.09 =$$

Mar 1-7:30 AM

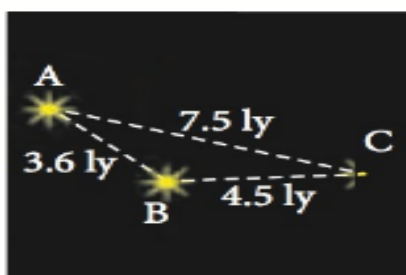
- 12.** Three stars are situated in space, as shown. The distances between the stars are given in light years (ly). Determine the angles of the triangle formed by the three stars.

**Math****Connect**

Distances in space are incredibly vast. They are often measured in light years (ly), which is the distance that light travels in one year. Light travels at a speed of 300 000 km/s! How far is a light year in kilometres?

Mar 1-7:31 AM

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